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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/863,052	05/22/2001	Dan F. Ammar	24418	7389

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EXAMINER

NGUYEN, SIMON

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/863,052	Applicant(s) AMMAR, DAN F.	
	Examiner SIMON D NGUYEN	Art Unit 2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 2, 4, 6, 9, 12, 14-15, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiPiazza et al. (5,101,173).

Regarding claims 1 and 12, DiPiazza discloses a transmitter (fig.1, abstract) having a MMIC with at least one amplifier (column 4 lines 22-25); a controller (12) comprising a memory (12a) that stored values of preset MMIC at various stages and operatively connected to the MMIC for sensing amplifier operating including amplifier current, temperature and power output and tuning the amplifier to an optimum operating conditions based on the stored values and the sensed operating conditions in a test and normal operational mode (column 2 line 20 to column 4 line 50). However, DiPiazza does not specifically disclose a transceiver.

It should be noted that DiPiazza discloses the stored program amplifier compensation apparatus in a transmitter utilizing sensing elements to provide the operational states of an RF power amplifier which is obvious to those skilled in the art can be implemented in a communication transceiver to automatically tune the power

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level of the transmitting signal in order to provide a substantial improvement in control and operation of cascaded RF power amplifier units.

Regarding claim 12, this claim is rejected for the same reason as set forth in claim 1, wherein the amplifier inherently including a source, a drain, and a gate. However, DiPiazza does not specifically disclose tuning the amplifier in either an individual or in a group. It should be noted that DiPiazza discloses tuning (adjusting) power of the amplifiers (column 4 lines 10-11) which means tuning as a group of all amplifiers which meets the condition of the claimed limitation "groups"(only one limit to be deal with when the applicant use term "or").

Regarding claims 2, 14, DiPiazza discloses a control unit comprising a microcontroller, connected to the MMIC (figs.1, column 4 lines 22-30). However, DiPiazza does not specifically disclose the microcontroller is a surface mounted microcontroller. The examiner takes an official notice that even though DiPiazza does not specifically disclose the microcontroller chip mounted on the surface, however, the microcontroller chip mounted on a surface of a circuit board is known to those skilled in the art in order to easily replace as well as to save cost of the replacement in case of defection or damage to the microcontroller without replacing a whole circuit board.

Regarding claims 4 and 15 , DiPiazza discloses EEPROM 12c (fig.1).

Regarding claims 6 and 17, DiPiazza discloses the controller adjusts the amplifier based on a sensed change in amplifier operational conditions (column 3 line 60 to column 4 line 21).

Regarding claims 9, 20, DiPiazza further discloses a temperature sensor for measuring the temperature of said MMIC, wherein said controller is responsive to sensed temperature for determining whether any change in amplifier operating conditions is a result of a changed temperature (column 3 line 60 to column 4 line 21).

2. Claims 5, 8, 10, 13, 16, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable DiPiazza et al. (5,101,173) in view of Kawase (5,828,953).

Regarding claims 8, 10, 13, 19, and 21, DiPiazza discloses an A/D converters (column 4 line 15). However, DiPiazza does not disclose a power sensor.

Kawase discloses a method and apparatus for controlling radio frequency amplifier (abstract, fig.1) comprising an memory (12) having stored values of operating conditions for the amplifier such that the controller (14) controls (tunes) the amplifier (1) based on the stored values (fig.1, column 8 lines 1-67), a power sensor (10) operatively connected to said at least one amplifier (2, 3), wherein said controller is responsive to said power sensor for tuning said at least one amplifier and a controller (14) responsive to the power sensor for adjusting the amplifier (column 4 line 38 to column 54, column 8 lines 1-67). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have DiPiazza, modified by Kawase in order to control power of different modulation signals.

Regarding claims 5 and 16, in the modified DiPiazza, Kawase discloses the stored data comprise optimum drain current and expected amplifier output (column 5 lines 4-54, column 7 lines 8-18, column 8 lines 58-67).

3. Claims 7, 11, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiPiazza et al. (5,101,173 in view of Behan et al. (5,977,826).

Regarding claims 7 and 18, DiPiazza does not disclose a potentiometer.

Behan discloses a MMIC having a potentiometer for measuring voltage at an amplifier based on sensed changes (temperature sensor) and storing compensation values in a look up table at the amplifier for a test (figs. 4-5, column 9 lines 11-36, column 10 lines 29, 47, column 11 line 40). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have DiPiazza, modified by Behan to measure voltage at each amplifier in order to control a transmission signal at a desired power.

Regarding claims 11 and 22, DiPiazza discloses the control unit operated for correcting a gain variation over temperature, the power attenuation as a function of frequency and temperature, gain equalization (compensation) (column 3 lines 7-12, column 4 lines 32-51). However, DiPiazza does not specifically disclose the linearization.

Behan discloses the same type of invention, in which the power attenuation linearization as a function of frequency and temperature (column 11 lines 43-58, column 12 lines 17-29). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have DiPiazza, modified by Behan to adjust a transmitting signal according to its preset value in order to improve the system performance.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Vaisanen (5,230,091) discloses a radio telephone is in operation the microprocessor receives form the sensors in formation about the temperature and it selects from its memory tuning information with which the transmitter power is automatically controlled (abstract, fig. 1, column 2 line 31 to column 3 line 49); Heidmann et al. (6,799,020) discloses tuning amplifiers either individually or in groups (column 6 lines 49-67, fig.3); Kawano disclose a portable telephone having a controller with a memory for storing a transmission power setting table, wherein the controller uses the setting table and sensing conditions (temperature) for controlling the power amplifier (figs.2, 3, 8-9, 11-12).

Response to Arguments

5. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

The new prior art to DiPiazza discloses a MMIC circuit having a microprocessor including a memory for storing values of optimum operating conditions, wherein the microprocessor controls the power of the amplifier based on the stored values and sensing conditions, wherein the system performs on both a test and a normal operational mode (see the rejection above).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Nguyen whose telephone number is (571) 272-7894. The examiner can normally be reached on Monday-Friday from 7:00 AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (571) 272-7899.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

600 Dulany, Alexandria, VA 22314

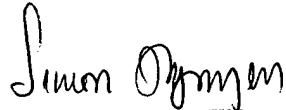
Or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered response should be brought to Knox building,
501 Dulany, Alexandria, VA.

Simon Nguyen

June 16, 2005


SIMON NGUYEN
PRIMARY EXAMINER